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F O R T U N E S W A S H E D A W A Y

"HYBRID CORN"

Broadcast No. 45 in a series
of discussions of soil con-
servation in the Ohio Valley.

WLW, Cincinnati

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Dayton, Ohio

SOUND: Thunder, followed by rain...

ALLISON

Fortunes Washed Away!

ORGAN: I GET THE BLUES WHEN IT RAINS.

ALLISON

Of all American agricultural products, field corn is outstanding, and corn is truly American. Spanish sailors reported to Columbus that they found a "sort of grain the Indians call maize, which tastes well, baked, dried, and made into flour." Corn produced in the great Middle West is a far cry from that of the colonial days--but even in that primitive era, experiments were being made. Early American Indians deliberately planted corns of different colors in the same hills, permitting free crossing of unrelated types. In 1865, an Austrian botanist named Gregor Johann Mendel, after experiments on garden peas, announced the law of heredity. And in 1876, Professor James Beal of Michigan Agricultural College declared...

BEAL

I crossed two distinctly unrelated corn varieties, seeking new vigor. The resultant hybrid yielded more corn than either of its parents.

ORGAN: BRIEF BRIDGE.

ALLISON

By 1908, G. H. Shull, of Carnegie Institution, reported...

SHULL

Mr. E. M. East, of the Connecticut Agricultural Experiment Station, and I have worked out a new method of corn breeding. It intensifies desirable characters, and eliminates inferior characteristics.

ORGAN: BRIEF BRIDGE.

ALLISON

And hybrid corn production had a mushroom growth, grew like Topsy. Three years ago, less than two percent of Ohio's corn fields were planted with hybrid seed. But in 1939, R. D. Lewis, extension agronomist of the Ohio State University, revealed the amazing figures that...

LEWIS

From fifty to sixty percent of the farmers of Ohio will plant corn hybrids in 1939!

ORGAN: UP AND OUT.

ALLISON

This is the story of one of those Ohio farmers, Clifford Coffman, who had begun to notice a decline in crop yields on his hill ground near Carroll, Fairfield County. In the spring of 1934...

CLIFF

There's no two ways of looking at it, dad. We're on the spot.

DAD

No argument there, Cliff. We've been growing too many soil depleting crops, and the land's just washing away from us, that's all.

CLIFF

In spite of all we've done. I've limed and fertilized this hill ground for three years, heavy, too. And then seeded that alfalfa.

DAD

And it still washes. I'll declare, I don't know where to turn next, and I thought I knew about all there was to farming.

CLIFF

Dad, what do you say if we try out that hybrid corn seed the Extension Service sent us? Here's the package, right here.

DAD

Let's have a look at it.

SOUND: Cloth sack ripped open with knife. Followed by paper rustling.

CLIFF

Here's the instructions. They want me to plant it and care for it on a tenth of an acre plot.

DAD

Well, I don't see how them small grains can ever produce anything worthwhile, Cliff.

CLIFF

Well, we've got 'em, dad. We might as well plant 'em. It's just a little batch, and won't take up much room.

DAD

I s'pose not. Where do you think you'll plant 'em?

CLIFF

I was thinking about the flat down there along the road...

DAD

...where the neighbors can see the corn real well? Don't plant that stuff down there, son! If you must plant it, all right, but I don't want folks to see the worst corn right up in the front of the field.

CLIFF

Well, how about planting it back of the orchard, then?

DAD

Oh, all right, but I'm going to be afraid to show my face around Lancaster (fade).

ORGAN: CROSSPATCH.

ALLISON

From that one-tenth acre plot, Clifford Coffman harvested six bushels of hybrid seed. The next year, he planted a bushel of that seed next to some standard field corn to see how it would compare in yield and performance. And in harvest time...

SOUND: Corn being husked by two men.

DAD

Cliff, you made a poor bet when you said the hybrid would outyield the standard corn.

CLIFF

Maybe so, dad, but let's wait 'til we get finished. Remember the rule--I'm to husk three shocks of the hybrid, and you husk three of the regular corn.

DAD

All right, but you can see for yourself. The regular corn's got longer and bigger ears--and taller stalks.

CLIFF

Just the same, I want to see how this test comes out.

DAD

That suits me. And there!

SOUND: Ear of corn tossed against bangboard.

DAD

Well, I told you so. The regular corn did it. Looks like it's made around one and a half more bushel baskets than the hybrid.

CLIFF

Pears that way. Well, I guess I'm sort of on the spot, dad--but, let's go ahead and weigh it, anyway.

ORGAN: BRIEF BRIDGE.

CLIFF

There's the figures, dad. In weighing the corn at $15\frac{1}{2}$ percent moisture content, the hybrid outyielded the standard corn, 76 bushel to 56 bushel. Even though there was a greater volume of standard corn, when it came to figuring actual moisture content and total weight, the hybrid was the highest yielder.

DAD

Well, that beats me. The old ears have more cob--but cobs sure don't weigh much.

CLIFF

Yeah, and another thing, dad, you can't fatten hogs on cobs. Well, anyway, that settles the matter.

DAD

I guess it does. And come to think of it, I liked the way that hybrid stood up straight after them heavy thunder showers we had last summer, when a lot of the other corn was bent over flat on the ground.

CLIFF

And remember, the stalks weren't so tall. Then, too, we didn't have so much heavy fodder to handle, either. More leaves, and every stalk on that darned hybrid had an ear.

DAD

I noticed that. And I've got a little confession to make. You remember the other Sunday when I stayed home while you and ma went to church?

CLIFF

Yes.

DAD

I went out and looked at that corn. I sure was disappointed with the old corn, when I saw so many barren stalks.

CLIFF

Why, you hard-shelled old cracker! All the time I thought you wasn't interested.

DAD

I watched that hybrid pretty close. A lot of times when you wasn't looking, or when you'd gone away some place, I'd sneak up there and take a squint at the hybrid and start cheerin' for the old corn. But hard as I'd cheer, it didn't help it any.

CLIFF

Why, you old rascal!

DAD

Now I can see it pretty clear. Here in Ohio, we've corned the land to death. Maybe that means we need a retreat from corn. But we must have corn. That means a compromise. If we can grow more corn on less land, we can concentrate the corn on the gentle slopes that won't wash away, and put the steeper slopes back to pasture and woods. That way, we can have our cake, and eat it too.

ORGAN: CROSSPATCH.

ALLISON

Retreat from corn. For corn is a clean-tilled crop, and clean-tilled crops have destroyed millions of acres of American farm lands. But America needs corn--the world needs corn! Through hybrid corn, through proper land use, American farmers may find the way to a more permanent agriculture--a more prosperous agriculture--soil conservation, soil defense.

ORGAN: CROSSPATCH.

ALLISON

And now, here is Ewing Jones, of the Soil Conservation Service of the United States Department of Agriculture, who, I presume, will carry on.

JONES

Your presumption, Paul Allison, is well founded. I'm going to carry on, but just long enough to ask Clifford Coffman one or two questions. Then he can do the carrying on. Is that a bargain, Mr. Coffman?

COFFMAN

It is -- not! As long as I'm up here, you stay too. And if you have any friends with you, bring them along.

JONES

Well, now, that's not a bad idea. Here's R. H. Morrish, regional agronomist of the Soil Conservation Service, and A. R. Marston, of the field crops department of the Michigan State College of Agriculture. Now, do you feel sufficiently bolstered?

COFFMAN

Very much so.

JONES

Fine. Now, suppose you go on with your story of hybrid corn, and soil conservation.

COFFMAN

Well, they sort of go hand in hand. In the winter of 1935, I went to Farmers' Week at Ohio State. One of the sessions was on strip cropping, as practiced by farmers in the Salt Creek project near Zanesville. I was quite interested in that one.

JONES

And you decided to try strip cropping?

COFFMAN

Yes, I laid out some strips of hybrid corn through my alfalfa meadow. They were off the contour some, but the worst mistake I made was in check rowing the corn so I could cultivate it up and down hill.

JONES

Nevertheless, that was a beginning.

COFFMAN

Then our county agent, Harold Thayer, told me about the CCC camp at Lancaster, which was just starting to work. They worked out a complete soil conservation plan for me. I've cut down my corn acreage more than one-third. In 1929, I had 45 acres of open pollinated corn, and harvested 2,500 bushels. Last year, I had 30 acres of hybrid seed corn, and produced 2,400 bushels. I credit this increase in production to the use of corn hybrids and soil conservation methods.

JONES

That is a remarkable change. I wonder how that compares with the experiences of Michigan farmers. Russ Marston, from Michigan State, ought to be able to answer that. How about it, Russ?

MARSTON

Well, Ewing, Michigan farmers are taking to hybrid corn in a big way. I suppose men like Paul Clement, Clarence Fleming, Herb Gingell, and Herb Gettel are responsible for a lot of it. Why, in Michigan, increases in yield of 25 percent or more are often produced by the use of hybrid seed over common open-pollinated field corn seed. Of course, Michigan isn't considered as a part of the Corn Belt, but we do grow a lot in the southern tier of counties.

JONES

And these increases in yield are caused by vigor resulting from crossing two or more inbred corn strains of different breeding.

MARSTON

That's right. But there's one thing that ought to be brought out right here, and that is, that all hybrids are not productive. That can't be emphasized too strongly.

COFFMAN

I'll back you up on that, Mr. Marston. The thing to do is to use the hybrid designated by the Agricultural Extension Service for the right section of the state.

MARSTON

That's it exactly. Adaptation is just as important in hybrid seed corn as in ordinary varieties. Hybrids adapted to southern Iowa are too late maturing to be grown safely in northern Iowa. And the fact that a hybrid is productive in Indiana is little evidence of its value in Illinois or Michigan. There's no magic in hybrid corn, and it should be used only when the value of the particular hybrid is known.

JONES

But how about the place of hybrid corn in soil conservation? Mr. Coffman, you and Russ Marston have both had a lot of experience along that line.

COFFMAN

Well, the use of corn hybrids enables me to produce the same amount of corn on fewer acres. That exposes less acreage to cultivation and erosion.

MARSTON

Michigan farmers, Ewing, will tell you that the more vigorous root systems on hybrid corn tend to hold the soil against washing, especially where it is combined with contour planting. The larger and more frequent leaves intercept rainfall. But don't you think Hipe Morrish is a pretty good authority on that?

JONES

Yes, he is. Hipe, I'm sorry we left you out in the cold so long. Please accept my apologies, and let us have the benefit of your experience.

MORRISH

All right, Ewing, but I was beginning to wonder if I were going to be left waiting at the altar. The whole point is that corn production just isn't adapted to hill country, any more than hybrid corn from Michigan is necessarily adapted to Missouri. When the soil conservationist replans a farm, he tries to figure out ways of growing fewer acres of corn on sloping land. If he can produce the required amount of corn, by using hybrids, on fewer acres, he can hold the soil on his steeper land by putting it to pasture.

JONES

That sounds logical.

MORRISH

Here's an actual test. During the summer of 1938, eleven hybrids were compared with standard varieties for erosion control under similar conditions on the Soil Conservation Service project at Hamilton, Ohio. It was found that the soil losses amounted to 12 percent for the hybrids, and 44 percent for the standard varieties.

MARSTON

Hipe, every now and then someone argues that the widespread use of corn hybrids will result in too much corn. No doubt about it, the average farmer now has too much corn acreage from the standpoint of conservation. But, if adapted, and again I say, adapted, hybrids are used, and we can reduce corn acreage, why expose five acres of land to the deteriorating effects of erosion if the same amount of corn may be produced on four acres?

MORRISH

The answer there, Russ, is why? But we've gone a long way in the last few years, and I think most farmers here in the Middle West realize that the less land that is exposed, the more land that will remain. I know that's true of Mr. Coffman.

COFFMAN

It is true, Mr. Morrish. We have gone a long way in the last few years. It seems like only yesterday that I got that first package of hybrid corn seed from R. D. Lewis at the University. Now I'm one of the largest private producers of certified hybrid seed corn in the state of Ohio.

JONES

Now, Mr. Coffman, suppose I were a farmer, and interested in hybrid corn. What would be your advice?

COFFMAN

Ewing, I'm a firm believer in soil conservation. I believe in hybrid corn. And my advice to any farmer is, if you're interested in hybrid corn, find out about the variety that is best adapted to your area. Find out if it has been tested for several years. Find out what other hybrids showed up well enough in the same tests to justify trying them also. Find out if the hybrid will ripen early enough for the purpose and under the conditions of its prospective use. And find out if the price is reasonable. See your county agricultural agent. I think you'll like hybrid corn.

JONES

Thank you, Clifford Coffman, of Fairfield County, Ohio. Judging from your enthusiasm, all America will be growing hybrid corn in another year. Russ Marston tells us that Michigan is headed in that direction, anyway.

MARSTON

There are a number of reasons for that, Ewing: One, of course, is that hybrid seed corn is proving its own points; it speaks for itself. Another reason is that Hipe Morrish, who used to be with Michigan State Agricultural College, has so endeared himself to the farmers of the state, that they are eager and willing to take his recommendations.

MORRISH

My recommendation, Russ, is that you get down to business and stop some of those wisecracks.

MARSTON

All right, Hipe. I knew you wouldn't mind a few jests from an old colleague. But getting down to business, hybrids do show a number of advantages over the old varieties of corn: stiffer stalks, practical elimination of barren stalks, fewer nubbins, more dependable performance in dry seasons; fewer smutted plants, less damage from corn borers, easier harvesting, and greater yields. Now, Hipe: your rebuttal?

MORRISH

I agree with you 100 percent, Russ Marston, as much as it pains me. Just let me say this: hilly land is not good corn land. No hybrid will make good corn from poor soil. Hybrids go with good farming. And good farming means soil conservation.

JONES

Thank you, both of you: Russ Marston, of Michigan State Agricultural College; and R. H. Morrish, of the Dayton, Ohio, office of the Soil Conservation Service. And, Paul Allison, I'll thank you if you'll say that....

ALLISON

I'll say it, Ewing....if you would like a copy of the latest bulletin on erosion control methods applicable to your state, write to Soil Conservation, Dayton, Ohio. A penny postcard will do, and your name and address will be sufficient. The address again, Soil Conservation, Dayton, Ohio. Next week, "Crop Residues."

SOUND: Thunder and rain...

ALLISON

Fortunes Washed Away is a studio presentation of the agriculture department of the Nation's Station.

